

**Pilot Synchronization Channel Structure for  
CDMA Mobile Communication System**

**ABSTRACT OF THE DISCLOSURE**

The invention discloses a pilot synchronization channel structure for mobile  
5 communication systems. The channel structure includes a pilot channel overlapping a  
synchronization channel (SCH), defined in the wideband code division multiple access  
(WCDMA) protocol. Each frame of the pilot channel consists of plural time slots. Each  
time slot is packed with pre-selected pilot symbols, after spread spectrum and scrambling.  
The overlap can be defined as search code of one symbol length with pilot signal of  $m - 1$   
10 symbols length by intermittent overlap. The overlap can also be defined as search code  
of one symbol length with pilot signal of  $m$  symbols length by continuous overlap. The  
invention combines organically both CDMA 2000 and WCDMA standards to provide  
better pilot and synchronization functions.

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